

The following is a complete listing of all claims in the application, with an indication of the status of each:

**Listing of claims:**

- 1           1. (currently amended) A fingerprint input apparatus, comprising:
  - 2                   a fingerprint sensor for reading a fingerprint ~~and then outputting~~
  - 3                           ~~fingerprint image data corresponding to said fingerprint, said~~
  - 4                           ~~fingerprint being made by applying moisture to a finger and~~
  - 5                           ~~applying pressure to the finger at a position on the sensor;~~
  - 6                   a fingerprint analyzer for
    - 7                           acquiring a fingerprint image corresponding to said read
    - 8                           fingerprint,
    - 9                           analyzing the quality of a said fingerprint image
    - 10                           ~~represented by said fingerprint image data~~ based on an image
    - 11                           quality and/or feature points of said fingerprint image, and
    - 12                           ~~creating~~ generating an evaluation result if a result of
    - 13                           said analysis indicates a quality malfunction ~~representing the~~
    - 14                           ~~cause of said quality failure and/or countermeasure against said~~
    - 15                           ~~cause when said analysis result indicates a quality failure, said~~
    - 16                           ~~evaluation result specifying whether said fingerprint is to be~~
    - 17                           ~~retaken with an increase or decrease in said moisture, an~~
    - 18                           ~~increase or decrease in said pressure, and a direction of change~~
    - 19                           ~~in said position;~~ and
    - 20                   an evaluation result display for displaying said evaluation result in a
    - 21                           plurality of ways,
    - 22                   wherein,

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01750024aa

Amendment dated 07/26/2004

Supplement to response submitted 07/02/2004

23                    if said quality malfunction indicates a first quality  
24                    malfunction associated with said image quality, said fingerprint  
25                    analyzer generates a first evaluation result that indicates a cause  
26                    of said first quality malfunction and/or a countermeasure for  
27                    said cause of said first quality malfunction as said evaluation  
28                    result, and  
29                    if said quality malfunction indicates a second quality  
30                    malfunction associated with said feature points, said fingerprint  
31                    analyzer generates a second evaluation result that indicates a  
32                    cause of said second quality malfunction and/or a  
33                    countermeasure for said cause of said second quality  
34                    malfunction as said evaluation result,  
35                    wherein said first quality malfunction includes at least one of  
36                    a quality malfunction associated with a fingerprint  
37                    display area of said fingerprint image and  
38                    a quality malfunction associated with a shape of ridges  
39                    of said fingerprint image, and  
40                    wherein the quality malfunction associated with the shape of ridges of  
41                    said fingerprint image includes a continuity malfunction of a ridge of said  
42                    fingerprint image.

1                    2. (original) The fingerprint input apparatus defined in Claim 1, wherein said  
2                    fingerprint analyzer comprises:  
3                    a quality evaluation and processing means for performing the analysis  
4                    based on the image quality and/or feature points of a fingerprint  
5                    image represented by said fingerprint image data; and  
6                    an evaluation result display and processing means for driving said  
7                    evaluation result display based on said evaluation result.

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1        3. (original) The fingerprint input apparatus defined in Claim 2, wherein said  
2        fingerprint sensor comprises a light source and an image pickup device.

1        4. (original) The fingerprint image apparatus defined in Claim 2, wherein  
2        said quality evaluation and processing means performs the analysis based on  
3        any one of the density of said fingerprint image, a fingerprint display area  
4        indicated by said fingerprint image, the shape of ridges indicated by said  
5        fingerprint image, and the position of a spiral shape indicated by said  
6        fingerprint image.

1        5. (previously presented) The fingerprint image apparatus defined in Claim 2,  
2        wherein said plurality of ways for evaluation result display is drawn from the  
3        group of light emitting elements for visually displaying said evaluation result,  
4        a display panel for visually displaying said evaluation result, and an acoustic  
5        device for acoustically displaying said evaluation result.

1        6. (previously presented) The fingerprint image apparatus defined in Claim 2,  
2        wherein said plurality of ways for evaluation result display includes a display  
3        panel for visually displaying said evaluation result and light emitting elements  
4        for visually displaying said evaluation result.

1        7. (previously presented) The fingerprint image apparatus defined in Claim 6,  
2        wherein said evaluation result display also includes an acoustic device for  
3        acoustically displaying said evaluation result.

1        8. (original) The fingerprint image apparatus defined in Claim 1, wherein  
2        said fingerprint sensor comprises a light source and an image pickup device.

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1        9. (currently amended) The fingerprint image apparatus defined in Claim 8,  
2        wherein said ~~quality evaluation and processing means~~ fingerprint analyzer  
3        performs the analysis based on any one of the density of said fingerprint  
4        image, a fingerprint display area indicated by said fingerprint image, the shape  
5        of ridges indicated by said fingerprint image, and the position of a spiral shape  
6        indicated by said fingerprint image.

1        10. (previously presented) The fingerprint image apparatus defined in Claim  
2        8, wherein said plurality of ways for evaluation result display is drawn from  
3        the group of light emitting elements for visually displaying said evaluation  
4        result, a display panel for visually displaying said evaluation result, and an  
5        acoustic device for acoustically displaying said evaluation result.

1        11. (previously presented) The fingerprint image apparatus defined in Claim  
2        8, wherein said plurality of ways for evaluation result display includes a  
3        display panel for visually displaying said evaluation result and light emitting  
4        elements for visually displaying said evaluation result.

1        12. (previously presented) The fingerprint image apparatus defined in Claim  
2        11, wherein said evaluation result display also includes an acoustic device for  
3        acoustically displaying said evaluation result.

1        13. (currently amended) The fingerprint image apparatus defined in Claim 1,  
2        wherein said ~~quality evaluation and processing means~~ fingerprint analyzer  
3        performs the analysis based on any one of the density of said fingerprint  
4        image, a fingerprint display area indicated by said fingerprint image, the shape

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5 of ridges indicated by said fingerprint image, and the position of a spiral shape  
6 indicated by said fingerprint image.

1 14. (previously presented) The fingerprint image apparatus defined in Claim  
2 13, wherein said plurality of ways for evaluation result display is drawn from  
3 the group of light emitting elements for visually displaying said evaluation  
4 result, a display panel for visually displaying said evaluation result, and an  
5 acoustic device for acoustically displaying said evaluation result.

1 15. (previously presented) The fingerprint image apparatus defined in Claim  
2 13, wherein said plurality of ways for evaluation result display includes a  
3 display panel for visually displaying said evaluation result and light emitting  
4 elements for visually displaying said evaluation result.

1 16. (previously presented) The fingerprint image apparatus defined in Claim  
2 15, wherein said evaluation result display also includes an acoustic device for  
3 acoustically displaying said evaluation result.

1 17. (previously presented) The fingerprint image apparatus defined in Claim  
2 1, wherein said plurality of ways for evaluation result display is drawn from  
3 the group of light emitting elements for visually displaying said evaluation  
4 result, a display panel for visually displaying said evaluation result, and an  
5 acoustic device for acoustically displaying said evaluation result.

1 18. (previously presented) The fingerprint image apparatus defined in Claim  
2 1, wherein said plurality of ways for evaluation result display includes a  
3 display panel for visually displaying said evaluation result and light emitting  
4 elements for visually displaying said evaluation result.

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- 1        19. (previously presented) The fingerprint image apparatus defined in Claim  
2        18, wherein said evaluation result display also includes an acoustic device for  
3        acoustically displaying said evaluation result.
- 1        20. (currently amended) A fingerprint input method comprising the steps of:  
2                reading a fingerprint and then outputting fingerprint image data  
3                        corresponding to said fingerprint, ~~said fingerprint being made~~  
4                        ~~by applying moisture to a finger and applying pressure to the~~  
5                        ~~finger at a position on a sensor;~~  
6                analyzing the quality of a fingerprint image ~~represented by said~~  
7                        fingerprint image data based on an image quality and/or feature  
8                        points of said fingerprint image, and creating generating an  
9                        evaluation result if a result of said analysis indicates a quality  
10                        malfunction representing the cause of said quality failure  
11                        ~~and/or a countermeasure against said cause when said analysis~~  
12                        ~~result indicates a quality failure, said evaluation result~~  
13                        ~~specifying whether said fingerprint is to be retaken with an~~  
14                        ~~increase or decrease in said moisture, an increase or decrease in~~  
15                        ~~said pressure, and a direction of change in said position; and~~  
16                displaying said evaluation result in a plurality of ways,  
17                wherein,  
18                        if said quality malfunction indicates a first quality  
19                        malfunction associated with said image quality, said fingerprint  
20                        analyzing step generates a first evaluation result that indicates a  
21                        cause of said first quality malfunction and/or a countermeasure  
22                        for said cause of said first quality malfunction as said  
23                        evaluation result, and

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24                    if said quality malfunction indicates a second quality  
25                    malfunction associated with said feature points, said fingerprint  
26                    analyzing step generates a second evaluation result that  
27                    indicates a cause of said second quality malfunction and/or a  
28                    countermeasure for said cause of said second quality  
29                    malfunction as said evaluation result,  
30                    wherein said first quality malfunction includes at least one of  
31                    a quality malfunction associated with a fingerprint  
32                    display area of said fingerprint image and  
33                    a quality malfunction associated with a shape of ridges  
34                    of said fingerprint image, and  
35                    wherein the quality malfunction associated with the shape of ridges of  
36                    said fingerprint image includes a continuity malfunction of a ridge of said  
37                    fingerprint image.